DOCUMENT RESUME

ED 149 430 EA 010 247

AUTHOR Webb, Gertrude M.
TITLE The Nautilus: An Ideal Elementary School.
PUB DATE 75
NOTE 14p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Elementary Education; Elementary School Students; *Individual Development; Individualized Instruction; *Individualized Programs; *School Design; *School Environment

ABSTRACT

The author presents the design for an ideal elementary school that would create a climate in which children could be educated to their maximum potential. The design arises from a philosophical base that incorporates this century's research in child development and learning theory. Consideration is given to the needs of the individual at the concrete-operational and formal-operational levels as he interacts with his society. Parental and teacher options are respected as they are able to select traditional or open classroom settings and horizontal or vertical organizational modes. Grouping is based on individual progress, aptitude, interest, the task at hand, and individual and group needs. Teachers have roles as generalists, specialists, and mentors. Parents are encouraged to become teammates in the educative process. The setting invites discussion of such current issues as the impact of parental and teacher expectations on children's learning, changing attitudes toward the stimulation and measurement of intelligence, and the mainstreaming of special students. (Author/IRT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED149430

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THE NAUTILUS:

AN IDEAL ELEMENTARY SCHOOL

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Gertrude Webb

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

By: Gertrude M. Webb

Copyright (C) 1975 Gertrude M. Webb
105 Edgewater Drive, Waltham, Mass. 02154
All Rights of Reproduction Reserved.

EA 010 247

"In the beginning God created the Heaven and the Earth -- And the Earth was without form and void . . .And God said, "Let there be light . . " And God said "Let the waters bring forth abundantly the moving creatures that hath life . . . and God created great whales . . . which the waters brought forth . . . and God saw that it was good . . . " [1]

And among the lowliest of the creatures inhabiting the sea was the Nautilus moving as it grew to ever larger chambers within its shell, a dramatic and graphic example of the gradual development of all God's creatures from strength to strength.

Would that our schools could so ideally further God's purpose in helping develop our children in the many facets of their personalities and their abilities -- to enhance their strengths and work around their weaknesses as they mature.

---

[1] Genesis, Chapter I, Verses 1 - 21

The oft-expressed goal of educating each school age child in one's community to his fullest potential is common to most statements of American educational philosophy. Historically this ideal of individualization was expressed by the dames of the New England one-room schoolhouse as they attempted to teach "reading, writing, and 'rithmetic" to the newest child on the wooden bench as well as to all others already in attendance.

As our country rapidly became industrialized and urbanized there were soon masses to be educated and neither personnel, time nor interest in listening to individual recitals of the learned material. A "more efficient system " for education had to be found. Placing children in grades, designing subject-oriented curricula and accompanying textbooks, page by page, seemed to provide the needed answer in the 1850's. For well over one hundred years we "perfected" the system and scientifically firmed up the organization in our attempts to meet the needs of our ever growing numbers. In our direct road to efficiency, somehow, we had lost sight of the very individual we were trying to educate.

Children who did not learn in the design we had arranged, the amount we had prescribed at a particular grade level, were failed. Retardation rates increased. Some children dropped out of our schools. Others became "push-outs" as we failed to meet their needs. Still others stayed on failing, becoming frustrated and angry or apathetic and withdrawn. In the late 1960's we began to hear the cry of the individual saying, "I am not just a number to be fed into a computer. I am I. Look at me. I have abilities -- I may even have disabilities. Help me develop what I am even if I 'march to the beat of a different drummer'."

In response, programs of individualized instruction such as I.G.I. (Individually Guided Instruction) were developed and currently proliferate our nation. They attempt to meet varying individual needs, eliminate student competition and insure maximal self-learning.

A century ago teachers were being educated to design, follow and teach a graded curriculum to a group of learners of approximately the same age (horizontally). Today's teachers are being trained diagnostically to students' learning strengths and weaknesses, to individualize curricula in language arts or numerical-spatial relationships to the child's conceptual developmental readiness level. Texts such as Individualizing Instruction in the Elementary School by Thomas and Crescumbeni and Practical Approaches to Individualized Instruction by Dunn and Dunn help teachers to design individual learning packets, contracts and units. As teachers plan for their students individually and developmentally, vertical arrangements appear at learning stations where the age range of individual children often spread over three years.

It seems to the writer that even as we earlier perfected horizontal graded classrooms where a strongly competitive spirit was considered desirable and the individual was lost, today's schools may be in danger of swinging the pendulum of individualized learning so far that we may lose sight of the basic human need for group interaction in which competition becomes a stimulus to learning rather than a destroyer of the individual and wherein cooperation between the group members becomes a way of learning. Questions to which we yet do not have answers arise and are concerned with the developing self of the child when he competes only with himself or when he is constantly three years behind or ahead of his peers. Nor do we know how individual or unique society will allow its children to be before penalizing them for not meeting its norms. Perhaps a wise path lies in the age old Greek adage, "nothing in excess". Realistically, society does have levels of expectancies for age appropriate behavior. These

limits may be expanded. They may be humanized. It seems to the writer they cannot be defied without paying the price of non-acceptance.

The ideal elementary school, recognizing both the needs of the individual and society's demands upon him, will support the individual and his needs as he becomes an interacting, contributing member of a whole series of potential groups - of his age, interest, ability, aptitude, special needs, neighborhood, religion, family, ethnic, socio-economic, cultural and philosophical groups, and whenever appropriate, an intermix and crossing of them all.

In my judgement, it is neither the shape nor the size of the group but the experience offered and the quality of the interpersonal relationships built within each group that are critical to the development of its members. Healthy growth occurs in both traditional and open classrooms. Recognizing the philosophical continuum from freedom to discipline by which we each live and the related educational models (open and traditional), our ideal elementary school would respect parental and teacher option for traditional or open classroom settings, for horizontal and vertical groupings, for team and individual teaching.

The ideal elementary school should provide the physical settings in which teachers and parents may encourage and support today's children as they grow according to the laws of nature. It should so structure its teachings that the learner may find the structure of his world. It should saturate the child with the learnings of those who have gone before him. Further, it should help him develop the skills, provide him with the tools for analysis and synthesis of that body of knowledge as the learner searches for answers to Man's problems. The ideal elementary school would offer today's children opportunities in living through which they may extract the best from the past as they plan for a better future. The ideal elementary school would strive to educate a socially responsible autonomous learner within a society in change.

The ideal elementary school should reflect the research in learning of this Country, recognizing the two major precepts propounded by the twentieth century masters, Dewey and Piaget - that learning is developmental, moving from the concrete to the abstract, and that learning is an active process of assimilation and integration. Accordingly, the ideal elementary school should offer its children innumerable opportunities to construct and have constructed for them, concrete experiences through which they may move to higher conceptual levels.

This century's research in child development, particularly the circular effect of physical, social and intellectual development on the emerging self, should be reflected in teacher-pupil attitudes. Such issues as how society treats its members who do not achieve its competency-based norms, the "special needs" concept, the impact of parental and teacher expectancies on children's learning should be subjects of frequent faculty discussion.

Freud said the two major tasks for man to learn are "to work" and "to love". Erikson elaborated by explaining one's developmental search for identity as a need to prepare oneself as a contributing member of society. Exactly when school classicists determined that their students did not need to work with their hands or learn about the workaday world and those training future tradesmen determined that their trainees needed no intellectual enrichment, I am not certain. It seems to this writer that the dichotomy of mind and hand is unnatural and that both groups of learners have been cheated by such programming. Our ideal elementary school would provide career orientation to all students so that respect and understanding of trades and professions could be developed in all. It would offer those who choose to become professionals opportunities to learn supportive manual skills, for example, how to fix a simple machine. It would offer those who choose to become the tradesmen of

our societies aesthetic opportunities as well as challenges in thinking and problem solving. Schools have too long helped to maintain social class differences by believing that the trade school student could not and would not appreciate intellectual stimulation. Such studies as the Skeels-Skodak[1] work in Iowa would seem to indicate that we are only beginning to know the effect of environmental stimulation on intelligence. The more recent work of Dr. Sidney Cobb, Professor of Community Health and Psychiatry at Brown University, stressing one's ability to cope as a significant factor in one's functioning, should further make educators question limiting opportunities of all potential learners.

A recently completed study[2] of the Philadelphia Public Schools done by the Federal Reserve Board of that city focused on the people, the methods, school plant design, ethnic and many other factors relating to the effectiveness of learning in their schools. One interesting conclusion was that more learning goes on in Philadelphia schools in the kindergarten to eight model, than in any other model such as the middle or junior high concept.

From these philosophical bases of concern for the growth of the individual as a learner within the international society of Man, the following model of a physical plant and beginnings of a policy manual flow.

---

[1] Asbell, Bernard "The Case of the Wondering I.Q.", Teachers and the Learning Process, Strom, Robert D., New Jersey: Prentice Hall, 1971, pp. 11-25

[2] Summers, Anita A. and Wolfe, Barbara L., Business Review, Federal Reserve Bank of Philadelphia, February, 1975

The Vision

Even as the pre-school years are foundation ones for the development of the motor and sensory skills that permit ever increasing individual performance, so are the elementary school years ones for development of communication skills that allow the individual to become a contributing member of a much larger society. During the elementary school years "thinking skills" are nurtured, preparing the individual for greater individual production and group participation. Each of these preparatory periods may be considered a stage in which certain competencies along individual continua are developed. Though each child develops individually,his development in each stage is premised on healthy social interaction as described by Harry Stack Sullivan.

Attempting to seek optimal development in each stage, the writer sees that happening whenever the environmental "pulling" forces interact with the genetically based"pushing" forces at the appropriate time. One might compare each stage of development or periods within each stage to the chambers of "The Chambered Nautilus" described by Oliver Wendell Holmes in his poem of that name. Even as the sea animal grows developing special abilities within each chamber before leaving that one behind to perform more complex tasks, so do our children within the chambers of their elementary years develop the skills and abilities necessary for their accommodation to a very complex society. I, therefore, should like to name our ideal elementary school "The Nautilus School" in the hope that its name will inspire all who are fortunate enough to participate in it to use the time allocated to them for the fullest development of the "chambers" of the developing learners.

The Nautilus

The Nautilus elementary school is a school enrolling 360 children. Half the population is graded, kindergarten through grade eight, moving horizontally from grade level to level in traditional classroom settings. The remaining one hundred and eighty students are enrolled in the primary school at approximately age five, moving to the elementary level at about age nine.

Vertical movement is characteristic at the learning stations of the non-traditional open "track of the school". Grouping is based on individual progress, aptitude, interest, the task at hand and individual and group needs. Flexibilty keynotes both the size of the group and the age and ability of members of the groups. Choice of participation in the traditional or "open" settings is made by parents for their children, by teachers for themselves.

Eight teacher-generalists are assigned to the primary "chamber", nine teacher-generalists to the elementary section. At the primary level and the lower elementary grades 4,5, and 6 half the generalists are assigned to traditional classrooms for self-contained teaching. The remaining teacher-generalist population meet with twenty children each at the beginning and close of each day. During the remainder of each day teachers may work in teams, instruct large or small groups, work with individual children or lead parent groups.

Teacher-generalists are supported by specialists in Language Arts, Fine Arts, Math - Science and Physical Education. Teachers are supported by Specialists such as Psychologists, Social Workers, Nurses and Learning Disabilities Diagnosticians, Prescriptive Writers, etc.

Each teacher is responsible for the educational welfare of approximately twenty children from school entrance until school leaving (at the completion of a "chamber") and monitors each of his charge's total progress. The weekly schedule provides time for such teacher advising. Common observation demonstrates many of the greats of the world have had a mentor. I believe such guidance from a teacher - mentor may prove beneficial to a greater percentage of the population than the gifted alone.

In the Nautilus school, parents are respected as participants, provided with a conference area where they can discuss, question and be advised on relevant educational issues and where conferences with teachers can be conveniently scheduled.

Study space is provided for the learners both indoors and outdoors. In the traditional classrooms desks and chairs for both students and teachers are movable. Materials and books appropriate to the subject matter are provided the students. In the self-contained classroom the teacher hears primary responsibility for the educational stimulation of her students.

In contrast to the traditional classrooms are open areas where learning stations are action-oriented around large tables with appropriate materials stored nearby, for example science, math, language arts, and social studies equipment. Books are stored on shelves lining the learning areas. Teachers are offering guidance - - asking questions, stimulating self-learning. Neither the students nor teachers have desks at the learning stations, though they do have an office or home base possibly abutting the teachers' conference room.

Carrels are available for individual quiet study as are large areas for demonstrations, movie presentation and the like. Each child has a home base where he goes at the beginning and close of school and where his personal property is kept.

In general, children are admitted to primary school in September or January closest to their fifth birthday. Exceptions are made for children evaluated by special services for both early and late admission when appropriate. The initial design of the Nautilus School plant is attached as Exhibit "A".

BIBLIOGRAPHY

Asbeel, Bernard, "The Case of the Wandering I.Q." Teachers and the Learning Process, Strom, Robert D. New Jersey: Prentice Hall, 1971

Bronfenbrenner, Urie, and Mahoney, Maureen. Influences on Human Development. Hinsdale, Illinois: Dryden Press, 1975.

Dale, Edgar. Building a Learning Environment. Bloomington, Indiana: Phi Delta Kappa Foundation, 1972.

Dunn, Rita, and Dunn, Kenneth. Practical Approaches to Individualized Instruction. West Nyack, New York: Parker Publishing, 1972

Erickson, Eric. Childhood and Society. New York: W.W. Norton, 1950.

First Schools Newsletter, No. 2. Report of Conference on First Schools held at Wapping First School. Bradford, England, 1971.

Furth, Hans G., and Wancha, Harry. Thinking Goes to School. New York: Oxford, 1974.

Furth, Hans G., and Wancha, Harry. Piaget and Knowledge: Theoretical Foundations. New Jersey: Prentice Hall, 1969.

Gorman, A. Teachers and Learners: The Interactive Process. New Jersey: Allyn & Bacon, 1963.

Gorman, Richard M., Discovering Piaget: A Guide for Teachers. Columbus, Ohio: Merrill Publishing Co., 1972

Hertzberg, Alvim, and Stone, Edward F. Schools are for Children. New York: Schocken Books, 1971.

Johnson, David W., and Johnson, Robert T. Learning Together and Alone. New Jersey: Prentice Hall, 1975.

Michaels, John W., Gusamen, Ruth H., and Scott, Lloyd F. New Designs for Elementary Curriculum and Instruction. New York: McGraw Hill, 1975.

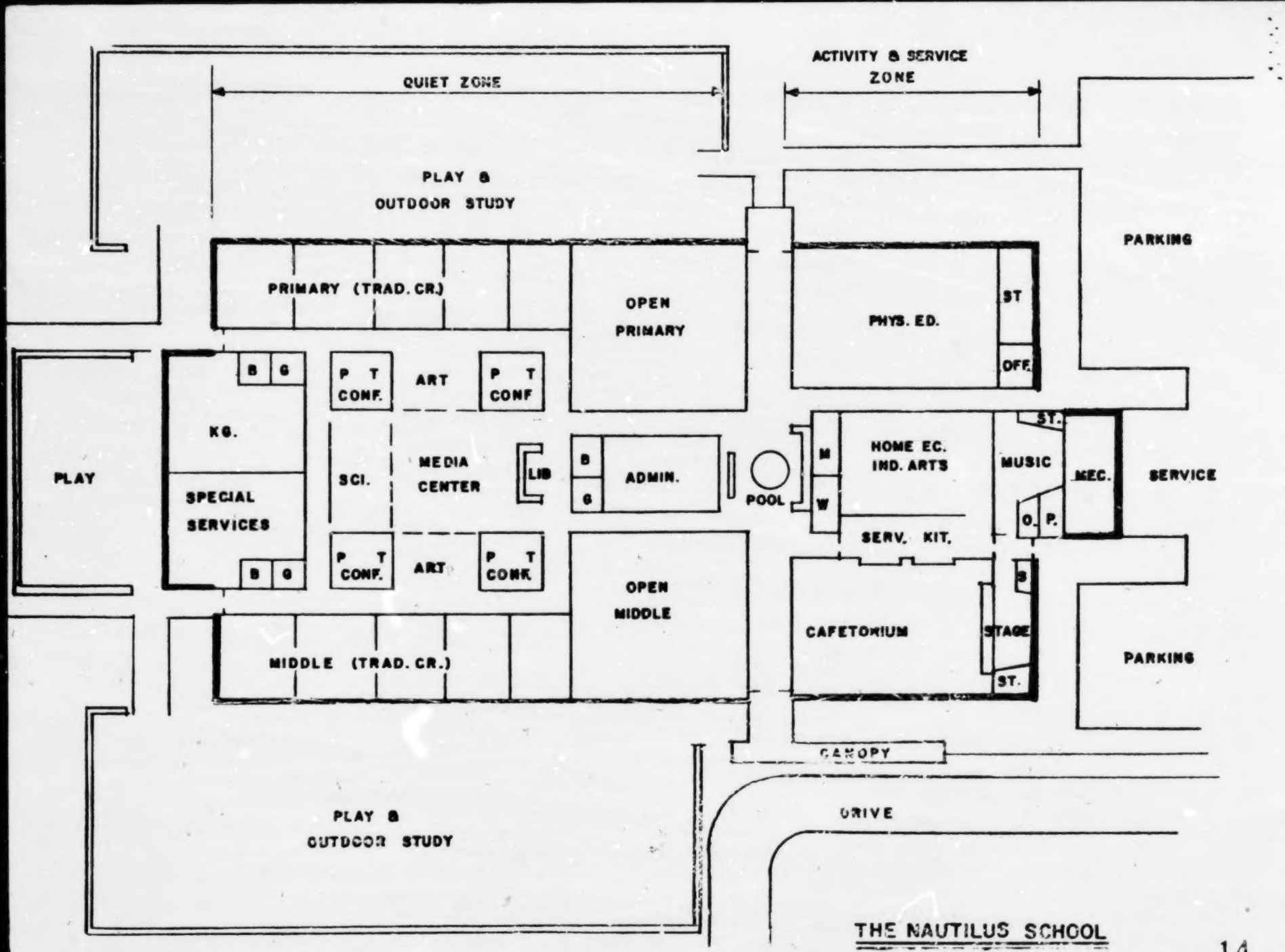
Mueller, Richard J., Principles of Classroom Learning and Perception. New York: Prager Publishers, 1974.

Purky, William W., Self-Concept and School Achievement. New Jersey: Prentice Hall, 1970.

Rosenberg, Marshall B. Diagnostic Teaching. Seattle, Washington: Seattle Publishing Co., 1968.

Summers, Anita and Wolfe, Barbara L. Business Review. Federal Reserve Bank of Philadelphia, February, 1975.

Thomas, George I. and Grescimbeni, Joseph. Individualizing Instruction in the Elementary School. New York: Random House, 1967.



THE NAUTILUS SCHOOL